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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/030,888      | 06/07/2002  | Markus Leuz          | 10191/2045          | 6086             |

26646 7590 09/05/2003

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NEW YORK, NY 10004

EXAMINER

TRAN, DIEM T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3748

DATE MAILED: 09/05/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/030,888

Applicant(s)

LEUZ ET AL.

Examiner

Diem Tran

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8,9 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8,9 and 11-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This office action is in response to the amendment filed on 6/20/03. In this amendment, claims 8, 11, 16 have been amended, claim 10 has been canceled and claim 17 has been added.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claims 8,16 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukuda (JP 405044439).***

Regarding claims 8, 16, Fukuda discloses a method for controlling an internal combustion engine having an exhaust treatment system that includes a particle filter, comprising the step of simulating a quantity characterizing a state of congestion of the particle filter in accordance with one operating parameter of the internal combustion engine including an oxygen concentration in the exhaust gas (see abstract, part constitution).

***Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Shinzawa et al. (US patent 5,319,930).***

Shinzawa discloses a method for controlling an internal combustion engine

Art Unit: 3748

having an exhaust treatment system that includes a particle filter, comprising the steps of:

determining an initial particle emission rate by mapping at least one operating parameter to a characteristic map (see col. 4, lines 51-58);

modifying the initial particle emission rate based on ambient conditions to determine a modified particle emission rate; determining an adjusted particle emission rate by multiplying the modified particle emission rate by a factor having a value based on temperature within the exhaust treatment system (see col. 9, lines 30+, col. 13, lines 17+); and

calculating a quantity characterizing a state of congestion of the particle filter by integrating the adjusted particle emission rate over time (see col. 5, lines 51-54).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claims 9, 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuda (JP 405044439) as applied to claim 8 above, in view of Kammel (US Patent 5,097,665).***

Regarding claims 9, 13-15, Fukuda discloses all the claimed limitations as

Art Unit: 3748

discussed in claim 8 above, however, fails to disclose simulating a state of congestion of the particle filter in accordance with rotational speed of the engine. Kammel teaches that it is conventional in the art, to simulate a state of congestion of the particle filter in accordance with rotational speed of the engine (see col. 13, lines 1-10, 60-63, col. 14, lines 10-21).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have determined a state of congestion of the particle filter in accordance with rotational speed of the engine as taught by Kammel, in the Fukuda device, since the use thereof would have provided a means to determine the state of clogging of the particle filter.

***Claim 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuda et al. (JP 405044439) as applied to claim 8 above, in view of official notice.***

Fukuda discloses all the claimed limitations as discussed in claim 8 above, however, fails to disclose determining the oxygen concentration in the exhaust gas in accordance with operating parameters of the engine.

It is well known to those with ordinary skill in the art that an air/fuel ratio or an oxygen concentration in the exhaust gas can be determined by using operating parameters of the engine since the use thereof would have saved cost by not using a sensor. Thus, Fukuda can also determine an oxygen concentration in the exhaust gas in accordance with operating parameters of the engine. Therefore, such disclosure by Fukuda is notoriously well known in the art so as to be proper for official notice.

***Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuda (JP 405044439) as applied to claim 8 above, in view of Shinzawa et al. (US Patent 5,319,930).***

Fukuda discloses all the claimed limitations as discussed in claim 8 above, however, fails to disclose one operating parameter including a temperature in the exhaust treatment system. Shinzawa teaches that it is conventional in the art, to utilize the exhaust gas temperature to simulate a quantity characterizing a state of congestion of the particle filter (see col. 3, lines 49-61).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized an exhaust gas temperature as taught by Shinzawa, in the Fukuda device, since the use thereof would have provided a means to determine the state of clogging of the particle filter.

### ***Response to Arguments***

Applicant's arguments filed on 6/20/03 have been fully considered but they are moot in view of a new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

Art Unit: 3748

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (703) 308-6073. The examiner can normally be reached on Monday -Friday from 8:30 a.m.- 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

DT  
September 3, 2003



Diem Tran  
Patent Examiner  
Art unit 3748



THOMAS DENION  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700